

Operation Manual for the Drummond Hood Mate[®] Pipet-Aid[®]

Catalog Number 4-000-300

4-000-302

4-000-303

**Quality
and Reliability
Guaranteed**

Made in USA
by



DRUMMOND
SCIENTIFIC COMPANY



Drummond Scientific Co.

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Broomall, PA 19008

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Operating Instructions for the Drummond

Statement of Purpose

All Pipet-Aid models are designed to transfer liquids with the use of serological, volumetric and/or blow-out pipets in either glass, plastic or something similar.


Rules for Safe Operation


- For indoor use only.
- Do not attempt to use the power supply with any other product.
- Never operate unit in an explosive atmosphere.
- Expelling liquid from a pipet generates aerosols. The faster the liquid is expelled, the more aerosols are generated. Understand the nature of the liquid being pipetted and take appropriate precautions.
- Do not operate unit with a damaged cord.
- Use power supply only in a standard electrical outlet.
- Do not handle power supply with wet hands.
- Do not put unit or power supply in water or other liquid.
- Pipetting acids or strong alkalis will damage unit.
- When servicing, use only identical Drummond replacement parts.
- Save these instructions.

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired. Always use the charger or power supply that is supplied with the unit.

Connections to Power Supply:

Check the power supply to see that the line voltage corresponds to the voltage indicated on the mains adapter.

 If the mains adapter supply and the line voltage are not compatible, the electrical components of the Pipet-Aid® may be damaged or destroyed.

 Before each use, confirm that the mains adapter cable is not damaged, worn or severely buckled and there are no breaks in the insulating surface. If any damage is noted, do not use the Pipet-Aid® until the damaged mains is replaced.

Specifications for Usage

This equipment is for indoor use only.

Temperature Range 10°C–35°C, Maximum Humidity 60%

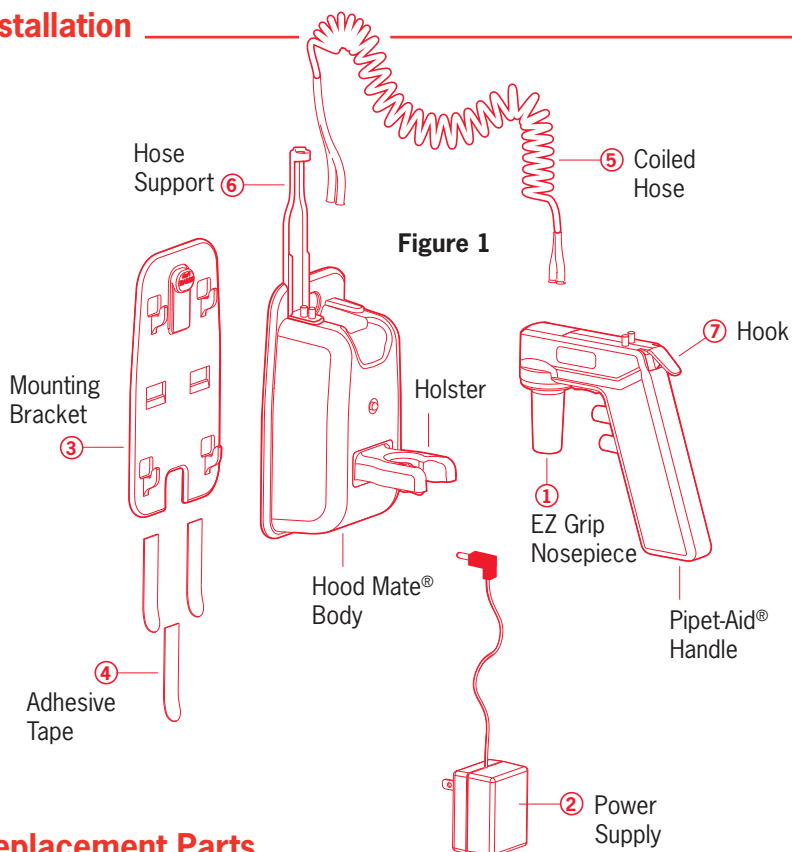
For use with pipets from 1 mL to 100 mL

FAILURE TO USE THE EQUIPMENT IN ACCORDANCE WITH INSTRUCTIONS OR MODIFYING THE EQUIPMENT WILL VOID WARRANTIES.

CAUTION: CAREFULLY READ THROUGH THIS ENTIRE MANUAL BEFORE USING YOUR NEW HOOD MATE® PIPET-AID®. PAY CLOSE ATTENTION TO THE RULES FOR SAFE OPERATION WARNINGS AND CAUTIONS.

Hood Mate® Pipet-Aid®

Installation



Replacement Parts

	Cat. No.	Description
	4-000-002	Rubber Insert (2/Pk)
	4-000-051	Replacement Filters (5/Pk)
	4-000-051-S	Replacement Sterile Filters (5/Pk)
	4-000-057	TC Gasket (Pair)
(1)	4-000-079	Nosepiece (Black)
(2)	4-000-080	Power Supply, 110 V
(3)	4-000-082	Backing Plate w/Tape
(4)	4-000-083	Replacement Tape (3/pk)
	4-000-084	Valve Body Assembly w/buttons
(5)	4-000-085	Coiled Hose
(6)	4-000-086	Hose Support
	4-000-087	Nosepiece Kit (1 black nosepiece, 4 filters, TC gasket/pair, & rubber insert)
(7)	4-000-088	Handle Hook

Applying the Mounting Bracket

Determine a suitable area to place the mounting bracket and clean the surface with isopropyl alcohol. On the back of the mounting bracket there are three adhesive strips, pull the black removal tabs off these strips and press the mounting bracket firmly in place for thirty (30) seconds.

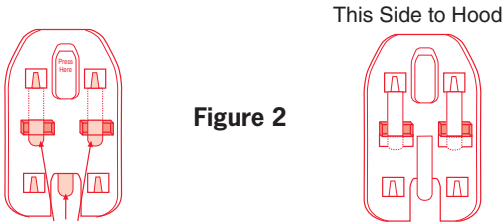


Figure 2

Removing the Mounting Bracket

To remove the mounting bracket from the inside of the hood, gently pull the removal tabs straight down until the bracket releases from inside the hood.

Connecting the Power Supply

Use only the power supply that is supplied with the unit. Insert connector into the socket in the rear of the Hood Mate body (Figure 3). Excess cord may be wrapped around the three hooks. Run the wire through the wire guide.

Attaching Hood Mate® to the Mounting Bracket

Attach the Hood Mate to the mounting bracket by aligning the slots of the Hood Mate with the hooks of the mounting bracket. Once the slots and hooks are aligned, slide the Hood Mate on and gently pull down until it clicks into place. Plug power supply into the outlet.

To Release Housing from Mounting Bracket

On the front of the mounting bracket there is a pump housing release button. This button enables the Hood Mate to be removed from the bracket for cleaning and other purposes. To reinstall the Hood Mate simply slide it on and gently pull down until it clicks into place.

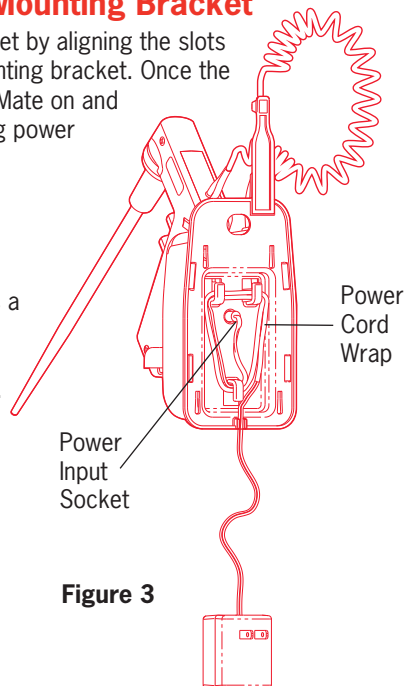


Figure 3

Operation

Parking the Handle

The Handle can be “parked” on the Hood Mate body two ways as shown in Figure 4 and Figure 5. Parking the handle by the hook allows the handle to be stored with a pipet in it. When the handle is in either park position, the pump will shut off.

Activation of Hood Mate®

Removing the handle from the parked position turns on the pump and the **RED** indicator light. If the handle is not parked and has not been used for pipetting, the Hood Mate will shut itself off in three (3) minutes. Depressing the semi-circular button on the top of the holster can reactivate it.

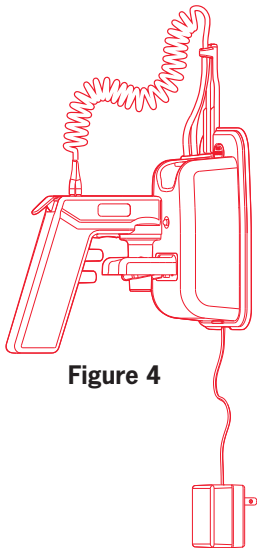


Figure 4

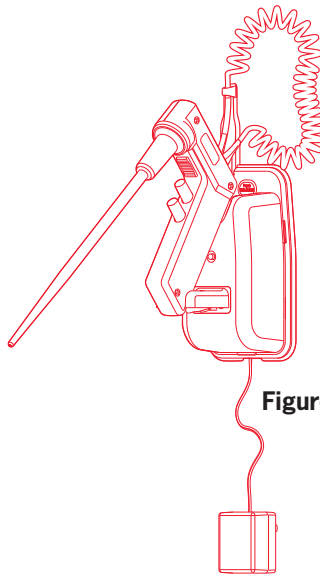


Figure 5

Speed Control

Each button has three speed ranges:

“F” Fast

“M” Medium

“S” Slow

The speed is selected by rotating the button on its axis until it snaps in place. (The speed chosen is visible when the handle is held in the right hand). These controls are independent of each other so one could fill fast and dispense slow. CHANGE SPEED WITH PIPET EMPTY. CHANGING SPEED WITH FLUID IN PIPET WILL RESULT IN LEAKAGE.

Tissue Culture Filter*

A two-layered membrane filter is located in the nosepiece. If an accidental overfilling of the pipet is encountered the wetted filter will prevent air movement in either direction thus shutting down pipetting operations.

The wetted parts should be cleaned and the filter must be replaced with a Drummond replacement filter.

Replacing TC Filter

Slide the **Nosepiece Release** toward the control buttons and twist the nosepiece to release it from the handle. Remove the two gaskets from the old filter and place them on the new filter. Place the filter and gasket assembly into the nosepiece and lock into handle with a twisting motion.

Instructions for Cleaning

Wiping the unit with a soft cloth or wipe with isopropyl alcohol is sufficient to clean the unit. Avoid the use of acetone and other organic solvents which will damage the handle.

All components inside the nosepiece may be autoclaved with the exception of the Drummond Self-locking Filter. Replace the filter when compromised.

STOP

Always disconnect the charger from the unit when cleaning.

Equipment Maintenance

Inspect interior of rubber insert for broken rings. Broken or worn rings may cause a reduction in vacuum and pressure, which will result in leakage from the pipet. Replace as necessary.

Inspect the coiled hose for cracks or other damage.

Two rubber gaskets are attached to the TC Filter. Unit will not function if either one is missing.

Inspect Nosepiece for wear. If the nosepiece is removed without using the nosepiece release it will damage nosepiece, resulting in a loss of vacuum and pressure. Check the three protrusions on nosepiece for wear.

****Why Use a Drummond Self-Locking Filter in Your Pipet-Aid.***

In order to provide a fail-safe, one-time check valve for Pipet-Aid pipettors, Drummond pioneered the use of a “self-locking” dual layer filter composed of one hydrophobic membrane and one hydrophilic membrane located in the nosepiece. With a dual layer membrane, when the filter is challenged with an aqueous solution, the hydrophobic layer prevents liquid from entering the handle and the wetted hydrophilic layer restricts the flow of air which locks the Pipet-Aid from further use. When this occurs, the user must replace the filter and clean the other wetted parts, thus protecting the Pipet-Aid as well as the integrity of subsequent dispensing.

The specifications for the Drummond filter are .8 µm for the hydrophilic layer and .8 µm for the hydrophobic layer. Most competitive pipetting units use a single layer hydrophobic membrane with ratings of either .22 µm or .45 µm. These filters protect the handle only. If challenged with an aqueous solution, the filter will prevent the liquid from entering the handle; however, it can be subsequently blown out and pipetting can be continued. This action creates an aerosol generator just above the pipet and all subsequent dispensing are at risk of being contaminated. While the user may think he or she is sterilizing the air entering the pipet, they are in fact introducing contamination.

The most effective safety measure to prevent contamination is the cotton or fiber plug in each pipet. Even if a sterile filter is installed in a Pipet-Aid, the first time an aerosol comes in contact with the bottom membrane, the filter is rendered forever nonsterile. The only thing that prevents this from happening is the plug in the pipet itself, which prevents aerosols from leaving the pipet and prevents them from entering. Drummond “self-locking” TC filters are supplied nonsterile because we believe there is no effective and practical method to maintain sterility in these devices; however, if sterile filters are needed, they are available (see below for catalog numbers).

Service

Drummond Scientific Company supplies a one year warranty on all Pipet-Aid Products. Spare parts can be ordered from your favorite laboratory supply firm, or by calling our toll-free number 1-800/523-7480.

If you have any questions or you need assistance our service department is available Monday through Friday, from 8:30 AM to 4:30 PM EST.

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4-000-086	Hose Support
4-000-087	Nosepiece Kit (1 black nosepiece, 4 filters, TC gasket/pair, & rubber insert)

Voltage Rating and Frequency: Power Supplies

4-000-080	120V, 60Hz	
4-000-081	240V, 50Hz, CE, Euro	Model # _____
4-000-081-E	230V, 50Hz, CE, UK	Serial # _____



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